(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 4 August 2005 (04.08.2005)

PCT

(10) International Publication Number WO 2005/069737 A3

(51) International Patent Classification⁷: G01N 21/64, C12M 1/36, G01N 1/10

(21) International Application Number:

PCT/IL2005/000090

(22) International Filing Date: 25 January 2005 (25.01.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/539.097 27 January 2004 (27.01.2004) US 60/565,850 28 April 2004 (28.04.2004)

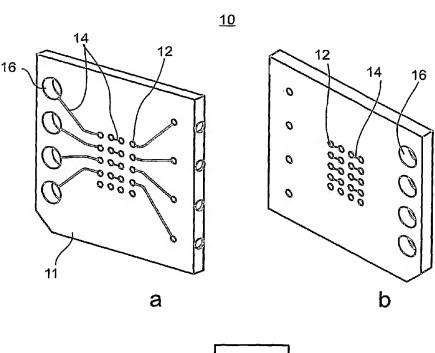
(71) Applicants (for all designated States except US): RAMOT AT TEL AVIV UNIVERSITY LTD. [IL/IL]; 32 Haim Levanon Street, 69975 Tel Aviv (IL). YISSUM RE-SEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL];

Hi Tech Park, The Edmond J. Safra Campus, The Hebrew University of Jerusalem, Givat Ram, 91390 Jerusalem (IL).

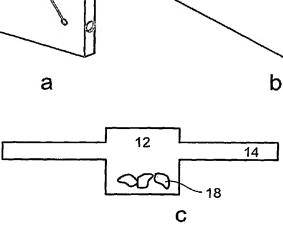
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BELKIN, Shimshon [IL/IL]; 2 Tnuat HaMeri Street, 55286 Kiryat Ono (IL). PEDAHZUR, Rami [IL/IL]; Moshav Beit Meir, 90865 Doar-Na Harei Yehuda (IL). ROSEN, Rachel [IL/IL]; 32/2 YeshaYahu HaNavi Street, 71700 ModiIn (IL). BENOVICI, Itai [IL/IL]; 59 HaPalmach Street, 92583 Jerusalem (IL). SHACHAM-DIAMAND, Yosi [IL/IL]; 13 HaNotrim Street, 30900 Zikhron-Yaakov (IL). RAB-NER, Arthur [IL/IL]; 42-2 Irus HaArgaman Street, 42490 Natania (IL). OKSMAN, Mark [IL/IL]; 3 Zahal Street, 59391 Bat-Yam (IL).
- (74) Agent: G. E. EHRLICH (1995) LTD.; 11 Menachem Begin Street, 52 521 Ramat-Gan (IL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR DETECTING ANALYTES



(57) Abstract: A device (10) for detecting a presence of an analyte in a sample. The device (10) comprises a device body configured with at least one reaction chamber (12) configured for containing a sensor (18) capable of producing a detectable signal when exposed to the analyte in the sample. The reaction chambers (12) are in fluid communication with at least one sample port (16) and at least one actuator port (34) via a first set of microfluidic channels (14) arranged such that application of a negative pressure to actuator port (34) delivers fluid placed in the sample port (16) to the reaction chambers (12).



WO 2005/069737 A3

1 | 1881 | 2 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 3 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.